

REMARKS

Applicant has carefully considered the November 30, 2006 Office Action, and the comments that follow are presented in a bona fide effort to address all issues raised in that Action and thereby place this case in condition for allowance. Claims 1-2 and 8-14 are pending in this application. In response to the Office Action dated November 30, 2006, no claims have been amended. Entry of the present response is respectfully solicited. It is believed that this response places this case in condition for allowance. Hence, prompt favorable reconsideration of this case is solicited.

Claims 1, 2 and 8-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hosokawa et al. (U.S. Pat. No. 6,280,861, hereinafter "Hosokawa") in view of Yu et al., *Journal of Applied Physics*, vol. 89, No. 4, pp 2343-50 (Feb. 15, 2001), hereinafter "Yu". The Examiner asserted that Hosokawa discloses an organic electroluminescent device and method of manufacturing the device. The Examiner acknowledged that Hosokawa does not specifically teach that the porphyrin compound, in the first hole injection layer, is copper phthalocyanine (CuPc). Nevertheless, the Examiner asserted that Yu, at abstract, teaches that copper phthalocyanine is used in hole injection layers in light-emitting diodes to enhance the hole injection from the anode to the emissive polymer layer and results in a decrease of the operating voltage of the device. The Examiner concluded that it would have been obvious to employ CuPc in Hosokawa' device to enhance the hole injection and decrease the voltage necessary to operate the device, as suggested by Yu. Applicants traverse.

Applicants stress that the requisite motivation to support the ultimate legal conclusion of obviousness under 35 U.S.C. § 103 requires not only a suggestion but a reasonable expectation

of success as to a particular benefit. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Obvious to try is not the standard. *In re O'Farrell*, 853 F.2d 894, 7 USPQ2d 1673 (Fed. Cir. 1988); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Dow Chemical Co.*, 837 F.2d 469, 5 USPQ2d 1529 (Fed. Cir. 1988). As the Examiner has not established that the prior art teaches, with a reasonable expectation of success, that a particular benefit (enhance the hole injection and decrease the voltage necessary to operate the device) would result from the Examiner's proposed combination, Applicants respectfully submit that one having ordinary skill in the art would not have been motivated to modify Hosokawa in view of Yu.

Moreover, Applicant submits that there exists potent indicia of nonobviousness regarding the present claimed subject matter. As disclosed in the present specification, the effects brought out from the stacked structure of the first hole injection layer including the phthalocyanine-based compound and the second hole injection layer including the carbon-based halide are described in Table 1 on page 17 of the specification of the present application. For the Examiner's convenience, Applicant has reproduced this section of the specification below.

Table 1

	first hole injection layer material	second hole injection layer material	initial drive voltage (V)	voltage increases after photoirradiation(V)
Comparative Example 1	CuPu	-	9.0	0.3
Comparative Example 2	-	CF <sub>x</sub>	6.0	2.0
Inventive Example 1	CuPu	CF <sub>x</sub>	6.1	0.5

As shown in Table 1, the initial drive voltages of the organic EL devices in Inventive Example 1 and Comparative Example 2 are reduced as compared with that of the organic EL device in the Comparative Example 1. Further, the voltage increases after irradiation of the

organic EL devices in Inventive Example 1 and Comparative Example 1 are reduced as compared with that of the organic EL device in Comparative Example 2.

It can be seen, therefore, that in the organic EL device in Comparative Example 1 with only the first hole injection layer 3a made of CuPc, reduction in the initial drive voltage was not realized, while in the organic EL device in Comparative Example 2 with only the second hole injection layer 3b made of CFx, reduction in the voltage increase after photoirradiation was not realized.

On the other hand, in the organic EL device in Inventive Example 1 with the first hole injection layer 3a and second hole injection layer 3b, reductions in the initial drive voltage and voltage increase after photoirradiation were realized.

With respect to independent method claim 14, the Examiner appears to admit that neither Hosokawa nor Yu discloses forming a second hole injection layer on the first hole injection layer by plasma chemical vapor deposition. The Examiner, at page 3 of the Office action, asserts that it is known to use plasma chemical vapor deposition to manufacture electroluminescent devices. Applicants submit that the Examiner has ignored an express method step in claim 14 and has not provided any factual evidence to support the statement that plasma chemical vapor deposition is known in the manufacture of electroluminescent devices, much less whether the process would be suitable in Hosokawa's method. Accordingly, the rejection over claim 14 is not legally viable for at least this reason.

It is believed that all pending claims are now in condition for allowance. Applicant therefore respectfully requests an early and favorable reconsideration and allowance of this application. If there are any outstanding issues which might be resolved by an interview or an

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Examiner's amendment, the Examiner is invited to call Applicant's representative at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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